DOCUMENT RESUME

ED 428 087 TM 029 488

AUTHOR Erion, R. L.; Steinley, Gary
TITLE What Does Application of Research Mean within a Constructivist Framework?
PUB DATE 1998-10-00
NOTE 12p.; Paper presented at the Annual Meeting of the Northern Rocky Mountain Educational Research Association (Chico Hot Springs, MT, October 8-10, 1998).
PUB TYPE Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Constructivism (Learning); Decision Making; Models; *Research Utilization; *Teacher Education; *Theory Practice Relationship

ABSTRACT

What it means to use research is a potentially contentious topic. With the emphasis on constructivist approaches in teacher education programs, the traditional explanations involving generalizability are inadequate in that there is no consideration of what the user brings to the use. Discussion of the various ways in which use can be framed leads to consideration of whether constructivism implies a single way to frame use. Viewing research as informing theory that, in turn, informs decision making may be a more fruitful, if less controlling, way for researchers to see the results of their research actually used by practitioners. (Contains 16 references.) (Author/SLD)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

TM

ED 428 087



# What Does Application of Research Mean Within a Constructivist Framework?

R. L. Erion & Gary Steinley
College of Education and Counseling
South Dakota State University
Brookings, SD 57007

Presented at the 1998 meeting of the
Northern Rocky Mountain Educational Research Association
(October 8-10, Chico Hot Springs, MT)

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
R. L. Erion
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)



U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

TM029488

BEST COPY AVAILABLE

Abstract

What it means to use research is a potentially contentious topic. With the emphasis on constructivist approaches in teacher education programs, the traditional explanations involving generalizability are inadequate in that there is no consideration of what the user brings to the use. Discussion on the various ways in which use can be framed leads to consideration of whether constructivism implies a single way to frame use.

What Does Application of Research Mean Within a Constructivist Framework?

This paper is intended as a starting point for a discussion. We provide some suggested questions and suggest at one way that one might approach teaching and thinking about research in a constructivist mode. It is written from the point of view of two people who teach students to understand and evaluate the research of others and it is this perspective we want to deal with in this paper. Most practitioners (ie. teachers, school administrators, counselors) are potential consumers of research to a much greater extent than they are potential producers of research. For the purposes of this paper, we would like to consider the application by practitioners of research other than their own.

"The research says..." is a phrase frequently heard in the halls of academe as well as at inservices. It is a generally accepted rhetorical device in discussions on "best practice." The idea that contained within the data from good research is a message which any objective "translation" will uncover seems to be a common one in education, along with the idea that the message will then have broad applications, limited chiefly by the generalizability of the research. It is, at the same time, a cause for concern that teachers do not seem to be sufficiently appreciative of the knowledge gained from research (Phillips, 1980; Rhine, 1998).

Over the last 50 years there have been a number of studies on the degree to which educators interact with the professional literature. In a general sense, this body of research has indicated that educators don't (Latham, 1993). Livingston and Castle (1989) argued that this doesn't mean that practitioners don't use and discuss theory-grounded and research-grounded methods. As Latham (1993) noted, there are other support systems that make the time-consuming task of critically reading technical reports unnecessary. Teachers engage in mastery learning, OBE, cooperative learning,

and authentic assessment to name a few examples of practice with some considerable grounding in professional literature. On the other hand, they often seem to do so on hearsay evidence. District personnel or administrators hear about something at a conference. There is an in-service from a local university professor. Itinerant entrepreneurs and professional propagandists provide workshops and an all too familiar picture emerges. School reform becomes defined by a particular practice with school personnel polarized into adherents and skeptics. Both sides learn to ignore much of what "the research says" since various translators seem to come up with differing translations and, in the event very much research has been done, there are studies with contradictory results. Those who teach the practitioners, on the other hand, generally take a different stance.

In the field of education, knowledge gained from research is often considered to be different from, generally better than, knowledge gained by other means. It is important to be able to say that the practice which is recommended is supported by research. In a previous review of textbooks on educational research (Erion & Steinley, 1994), we noted the reviewed educational research texts tended to either ignore or explicitly devalue teacher experience as a source of knowledge relative to knowledge gained from research. We also noted that these texts generally seemed to treat the main problem in application as one of making judgments concerning generalizability.

Considering application of research in the context of constructivism presents several problems. First, there is the problem of what is meant by constructivism. As critics have pointed out (eg. Phillips, 1995; Prawat, 1996), there is considerable disagreement as to what constructivism is and many of the differences involve basic philosophical assumptions. As Phillips (1995) and others (e.g. Driver et al., 1994)

have also noted, there are commonalities in most versions of constructivism including the need for active participation in the learning process on the part of the learner and the importance of social learning. Phillips identifies these commonalities as being modern forms of progressivism. For purposes of the paper, we will recognize the importance of the social construction of meaning, but place most of the emphasis on the constructive aspects of the individual learner.

There are a number of ways to describe research, but, given our interest in a constructivist approach, thinking of research as a particular kind of educational experience is useful. Research is fundamentally an educational activity. It is an organized set of experiences which are explicitly for the purpose of learning, where the researchers are both the organizers of the experience and at least some of the intended learners. For the practitioner, the experiences are vicarious. Using constuctivism, it seems obvious that the research experience will not provide the same understanding for a given practitioner as it does for a given researcher.

In addition, the researcher and practitioner may view the same problem from different perspectives. The quantitative researcher, for example, often looks to see trends within a population and makes recommendations based on those trends. Practitioners generally deal with non-random samples of the general population under conditions which are rarely approached by researchers. This is not to say that research ought to be considered useless out of hand. Relative to most experiences, research has the advantage in that it has been structured for learning.

Considering research as a form of learning (with a broadly constructivist view that learning is a process of building understanding which is dependent not only on the nature of experiences, but also the nature of the learner including the learner's previous experiences) leads to relativism. Research results do not speaking in some

universally comprehensible voice. Phillips (1995) listed as one of the problems with constructivism the relativistic stance it entails. If different individuals (groups) construct different understandings of a given situation and act on those understandings, one must give at least some weight to each understanding. Relativistic discussions are particularly annoying to some, yet if one is worried about the application of research, there seems little doubt that the reader of the research is an important participant.

An extension of this can be applied to evaluation of research. Evaluators bring different understandings and purposes to the task. It is probably more accurate, however, to say that constructivism leads one to a viewpoint on evaluating research that is consistent with the generally prevailing view of validity as argument instead of measurement.

There are also problems with what is meant by application. Huberman (1990) offered a framework for considering application. Writing specifically on how research is used by practitioners, he organized effects of research as either cognitive or affective changes in practitioners (conceptual use) or changes in practice (instrumental use). Firestone (1993), while arguing for the value of qualitative research, identified three ways in which one might generalize: From case to case, from case (sample) to population, and from case to theory. The first two seem related to Huberman's (1990) instrumental use while the third seems more like conceptual use.

When Phillips (1980) spoke of researchers coming up with "some solid findings applying to all children, or to some important subsets of children" (pp. 18-19), he seemed to have in mind instrumental use. On the other hand, in an argument that emphasized the differences in how individuals would view the same results as well as the often suppressed premises on which researchers base their works (see, for example, Marshall & Barritt, 1990), he stated that the conclusions that researchers

draw ought to be viewed with suspicion. This argument seems more consistent with research as leading to understanding (theory).

Phillips (1980) was not alone in seeing research as directly connected to decisions about practice as well as guiding theory building. McMillan (1996) argued that each of the major types of research has a somewhat different purpose, but gave as an overall purpose the provision of "sound explanations that can become knowledge" (p. 7)(conceptual use). He follows this with an explanation on generalizability, followed by a list of different types of research with characteristics including purpose.

Carr and Kemmis (1986), writing in the context of action research, organized educational research within three traditions, a natural science or positivist tradition, an interpretivist tradition, and a critical tradition, each with a somewhat different purpose for research. In the positivist tradition, research leads to theory which in turn allows prediction (similar to what Livingston and Castle (1989) characterized as explanation and direction). The interpretivist tradition is to "deepen insight and enliven commitment," acting indirectly to to influence action "through the mediation of the critical reflection of individual actors" (Carr & Kemmis, 1986, p. 93). The critical tradition, drawing heavily on Habermas, emphasizes socially and politically significant undertakings with the research report being the report of the results. All three of these traditions appear to be most related to conceptual use.

Livingston and Castle (1989) described five ways in which teachers might use research. The first, exemplified by What Works (United States Department of Education, 1986), was educational research as leading to "big principles" for directing practice. The second, related to the first, was the use of research to justify or validate decisions or activities. These seem largely instrumental use. On the other hand, they listed contemplation and deliberation, which seems similar to the Carr and

Kemmis (1986) description of interpretivist research, and transformation, part of the critical social research concept of Carr and Kemmis (1986), particularly if research leads to a critical examination of the assumptions underlying practice. Lastly, given their interest in action research, they considered research produced by practitioners to guide and examine their own behaviors. These all seem more related to conceptual use of research.

The conceptual use of research, which seems to be becoming more prominent, is quite compatible with constructivism. Individuals build theory based on previous understanding and their experience, vicarious and otherwise. We would suggest that it may be the only way, from a constructivist viewpoint, that research is used. Using the term "theory" for "understanding, practitioners apply theories, although those theories may or may not be formally organized in explicit form. Internal and external validity considerations are really limitations on the degree to which research informs theory.

Although the term "theory" is used here in a very broad sense, this has a good deal of appeal from several angles. It provides a ready argument for the importance of theory. Anyone who has taught inexperienced practitioners can likely appreciate this. Since theories are constructs, it also makes explicit the use of research as a constructive activity.

A more fundamental influence on application comes with the defining of research questions. With the emphasis on differences which learners may bring to a cognitive task, the broad questions of "best practice" of the 1970's and 1980's have given way to more specific questions and the direct study of beliefs. Wideen, Mayer-Smith, and Moon (1998), for example, followed Carter (1990) in pointing out that research on educating teachers shifted in the 1980's from trying to find "what

beginning teachers should know and how they should best be trained to know it to attempting to know what they actually do know and how that knowledge is acquired" (p.133).

Is generalizability across subjects, situation, time, treatments, and measures sufficient as a theory for guiding the use of research within a constructivist framework? Generalizability across subjects has obvious practical use when it doesn't matter what individuals will do. That is, if one wishes to predict voting patterns or marketing trends, it is only necessary that one predict numbers, not individual responses. Most practitioners in helping professions work with individual cases. With the shift in the kinds of questions asked which comes with constructivism, however, may also come greater promise for the use of research by practitioners. As the research questions are more predicated on learning about individual and group understanding, the goals of researchers and practitioners seem to be converging.

It has often seemed to us that research in the tradition of Huberman's (1990) instrumental use has been used as a tool for telling practitioners what to do, rather than provide a basis for decision making. Viewing research as informing theory which in turn informs decision making may be a more fruitful, if less controlling, way for researchers to see the results of their research actually used by practitioners. It may also provide a context in which practitioners are more likely to read research.

References

Carr, W., & Kemmis, S. (1986). Becoming critical. Philadelphia: Falmer.

Carter, C. (1990). Teachers' knowledge and learning to teach. In W. R. Houston (Ed.), Handbook of research on teacher education (pp. 291-310). New York: Macmillan.

Driver, R., Asoko, H., Leach, J., Mortimier, E. & Scott, P. (1994).

Erion, R. L., & Steinley, G. L. (1994). Applying research: An analysis of texts for consumers of research. Paper presented at the annual meeting of the Midwestern Educational Research Association, Chicago, October 13, 1994. (ERIC Document Reproduction Service No. ED 384 016)

Firestone, W. A. (1993). Alternative arguments for generalizing from data as applied to qualitative research. Educational Researcher, 22(4), 16-23.

Huberman, M. (1990, Summer). Linkage between researchers and practitioners: A qualitative study. American Educational Research Journal, 27, 363-391.

Latham, G. (1993). Do educators use the literature of the profession? NASSP Bulletin, 77,(550), 63-70.

Livingston, C., & Castle, S. (1989). Teachers using research: What does it mean? In C. Livingston & S. Castle (Eds.) Teachers and research in action (13-28). Washington, DC: National Education Association.

Marshall, M. J. & Barritt, L. S. (1990). Choice made, worlds created: The rhetoric of AERJ. American Educational Research Journal, 27, 589-609.

McMillan, J. H. (1996). Educational research fundamentals for the consumer (2nd ed.). New York: HarperCollins.

Phillips, D. C. (1980). What do the researcher and the practitioner have to offer each other? Educational Researcher, 9(10), 17-20, 24.

Phillips, D. C. (1995). The good, the bad, and the ugly: The many faces of constructivism. Educational Researcher, 24(7), 5-12.

Prawat, R. S. (1996). Constuctivisms, modern and postmodern. Educational Psychologist, 3(3/4), 215-225.

Rhine, S. (1998). The role of research and teachers' knowledge base in professional development. Educational Researcher, 27(5), 27-31.

United States Department of Education. (1986). What works. Washington, DC: Author.

Wideen, M., Mayer-Smith, J., & Moon, B. (1998). A critical analysis of the research on learning to teach: Making the case for an ecological perspective on inquiry. Review of Educational Research, 68, 130-178.